



# Full wwPDB NMR Structure Validation Report ⓘ

Feb 17, 2018 – 04:44 am GMT

PDB ID : 1NXN  
Title : SOLUTION STRUCTURE OF CONTRYPHAN-VN  
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Deposited on : 2003-02-11

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We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/NMRValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

Cyrange	:	Kirchner and Güntert (2011)
NmrClust	:	Kelley et al. (1996)
MolProbity	:	4.02b-467
Mogul	:	1.7.3 (157068), CSD as539be (2018)
Percentile statistics	:	20171227.v01 (using entries in the PDB archive December 27th 2017)
RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
ShiftChecker	:	trunk30686
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk30686

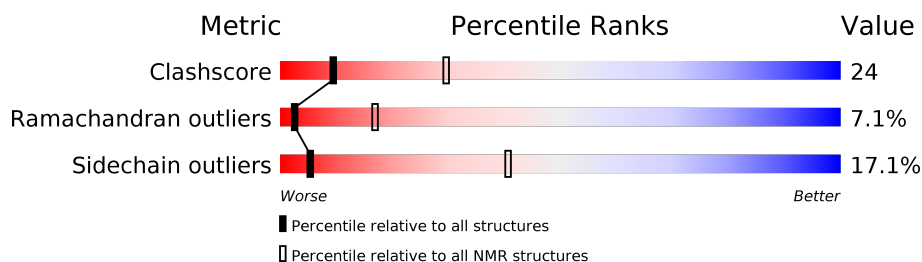
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*SOLUTION NMR*

The overall completeness of chemical shifts assignment is 86%.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	NMR archive (#Entries)
Clashscore	136279	12091
Ramachandran outliers	132675	10835
Sidechain outliers	132484	10811

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and a grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	10	

## 2 Ensemble composition and analysis ⓘ

This entry contains 20 models. The atoms present in the NMR models are not consistent. Some calculations may have failed as a result. All residues are included in the validation scores.

Cyrange was unable to find well-defined residues.

Error message: The number of core atoms ( 6) was below the domain threshold value ( 8).

NmrClust was unable to cluster the ensemble.

Error message: Wrapper check: not enough residues in core to run NmrClust

### 3 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 142 atoms, of which 66 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER).

Mol	Chain	Residues	Atoms						Trace
1	A	10	Total	C	H	N	O	S	1
			142	50	66	13	11	2	

## 4 Residue-property plots

### 4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA and DNA chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

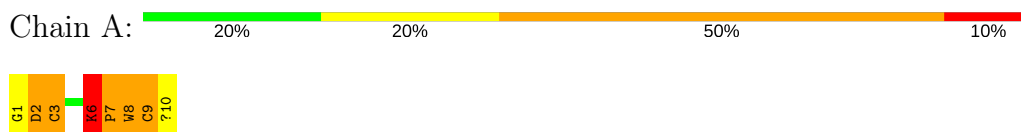


### 4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

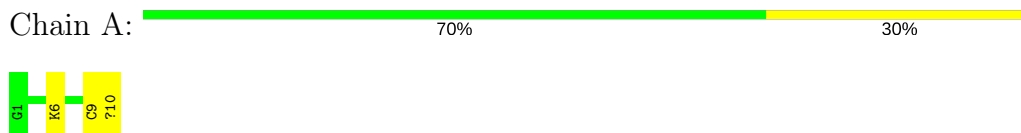
#### 4.2.1 Score per residue for model 1

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



#### 4.2.2 Score per residue for model 2

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



### 4.2.3 Score per residue for model 3

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



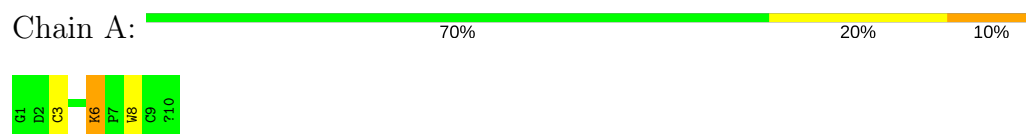
### 4.2.4 Score per residue for model 4

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



### 4.2.5 Score per residue for model 5

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



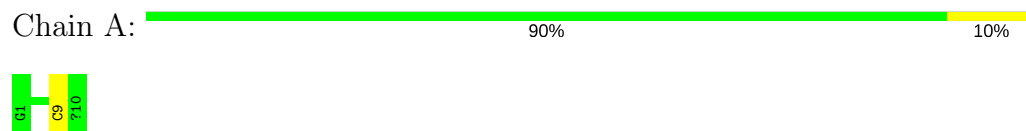
### 4.2.6 Score per residue for model 6

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



### 4.2.7 Score per residue for model 7

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



#### 4.2.8 Score per residue for model 8

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



#### 4.2.9 Score per residue for model 9

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



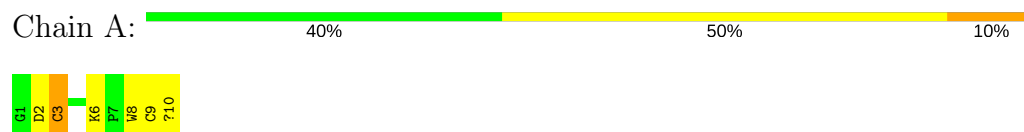
#### 4.2.10 Score per residue for model 10

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



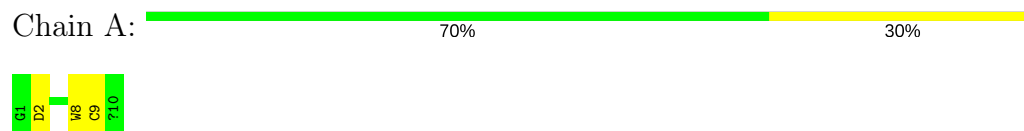
#### 4.2.11 Score per residue for model 11

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



#### 4.2.12 Score per residue for model 12

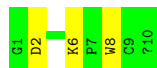
- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)



#### 4.2.13 Score per residue for model 13

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

Chain A:  70% 30%



#### 4.2.14 Score per residue for model 14

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

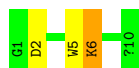
Chain A:  60% 30% 10%



#### 4.2.15 Score per residue for model 15

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

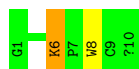
Chain A:  70% 20% 10%



#### 4.2.16 Score per residue for model 16

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

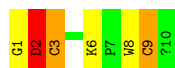
Chain A:  80% 10% 10%



#### 4.2.17 Score per residue for model 17

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)


Chain A:  40% 30% 20% 10%

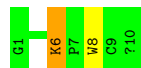




#### 4.2.18 Score per residue for model 18

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

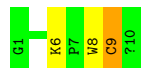
Chain A:  80% 10% 10%



#### 4.2.19 Score per residue for model 19


- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

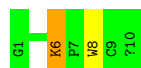
Chain A:  70% 20% 10%



#### 4.2.20 Score per residue for model 20

- Molecule 1: CONTRYPHAN-VN, MAJOR FORM (CIS CONFORMER)

Chain A:  80% 10% 10%



## 5 Refinement protocol and experimental data overview

The models were refined using the following method: *simulated annealing*.

Of the 200 calculated structures, 20 were deposited, based on the following criterion: *FEWEST RESTRAINTS VIOLATIONS, LOWEST ENERGY*.

The following table shows the software used for structure solution, optimisation and refinement.

Software name	Classification	Version
XWINNMR	structure solution	
NMRPIPE	structure solution	
NMRVIEW	structure solution	
XPLOR	structure solution	1.5
XPLOR	refinement	1.5

The following table shows chemical shift validation statistics as aggregates over all chemical shift files. Detailed validation can be found in section 7 of this report.

Chemical shift file(s)	BMRB entry 5608
Number of chemical shift lists	1
Total number of shifts	98
Number of shifts mapped to atoms	98
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	86%

No validations of the models with respect to experimental NMR restraints is performed at this time.

## 6 Model quality [i](#)

### 6.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: DTR, NH2

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the (average) root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#Z>5	RMSZ	#Z>5
1	A	1.24±1.38	1±4/63 (1.3±5.9%)	1.41±0.65	0±2/84 (0.4±1.8%)
All	All	1.85	17/1260 (1.3%)	1.56	7/1680 (0.4%)

All unique bond outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	A	9	CYS	CA-CB	-24.64	0.99	1.53	1	1
1	A	2	ASP	CA-CB	-19.88	1.10	1.53	1	1
1	A	6	LYS	CE-NZ	-18.36	1.03	1.49	1	1
1	A	2	ASP	N-CA	-17.66	1.11	1.46	1	1
1	A	6	LYS	CG-CD	-17.39	0.93	1.52	1	1
1	A	9	CYS	CB-SG	-17.00	1.53	1.82	1	1
1	A	3	CYS	CB-SG	-15.33	1.56	1.82	1	1
1	A	6	LYS	CD-CE	-10.12	1.25	1.51	1	1
1	A	8	TRP	C-O	-9.33	1.05	1.23	1	1
1	A	7	PRO	N-CD	-8.36	1.36	1.47	1	1
1	A	8	TRP	C-N	-7.68	1.16	1.34	1	1
1	A	8	TRP	NE1-CE2	-6.81	1.28	1.37	1	1
1	A	1	GLY	C-N	6.17	1.48	1.34	1	1
1	A	8	TRP	CD2-CE3	-5.98	1.31	1.40	1	1
1	A	6	LYS	C-O	-5.91	1.12	1.23	1	1
1	A	8	TRP	CG-CD1	-5.71	1.28	1.36	1	1
1	A	7	PRO	CA-CB	-5.17	1.43	1.53	1	1

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	6	LYS	CB-CG-CD	21.51	167.54	111.60	1	1
1	A	6	LYS	CG-CD-CE	20.97	174.81	111.90	1	1
1	A	6	LYS	CD-CE-NZ	10.88	136.73	111.70	1	1
1	A	9	CYS	N-CA-CB	10.14	128.85	110.60	1	1
1	A	9	CYS	CA-CB-SG	9.65	131.37	114.00	1	1
1	A	2	ASP	N-CA-CB	-8.35	95.57	110.60	1	1
1	A	8	TRP	O-C-N	-5.09	114.55	122.70	1	1

There are no chirality outliers.

There are no planarity outliers.

## 6.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in each chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	76	65	64	3±4
All	All	1520	1319	1280	68

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 24.

All unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:6:LYS:CG	1:A:6:LYS:CE	1.20	2.18	1	1
1:A:6:LYS:CB	1:A:6:LYS:CD	1.07	2.32	1	1
1:A:6:LYS:CG	1:A:6:LYS:CD	0.90	0.93	1	1
1:A:1:GLY:O	1:A:3:CYS:N	0.89	2.05	17	1
1:A:3:CYS:SG	1:A:9:CYS:CB	0.89	2.59	1	1
1:A:6:LYS:HG3	1:A:6:LYS:CD	0.84	1.39	1	1
1:A:6:LYS:HG2	1:A:6:LYS:CD	0.84	1.39	1	1
1:A:1:GLY:O	1:A:2:ASP:OD1	0.84	1.94	4	1
1:A:3:CYS:SG	1:A:10:NH2:N	0.83	2.51	11	1
1:A:6:LYS:CG	1:A:6:LYS:HD3	0.83	1.36	1	1
1:A:6:LYS:CG	1:A:6:LYS:HD2	0.82	1.36	1	1
1:A:2:ASP:HA	1:A:6:LYS:NZ	0.73	1.99	3	1

*Continued on next page...*

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:8:TRP:O	1:A:9:CYS:O	0.63	2.16	10	2
1:A:1:GLY:C	1:A:2:ASP:CG	0.62	2.57	4	1
1:A:2:ASP:CA	1:A:6:LYS:NZ	0.59	2.65	3	1
1:A:6:LYS:HD3	1:A:7:PRO:HD2	0.59	1.73	3	1
1:A:6:LYS:HD3	1:A:7:PRO:CD	0.59	2.28	3	1
1:A:1:GLY:C	1:A:3:CYS:N	0.56	2.59	17	1
1:A:6:LYS:NZ	1:A:8:TRP:CH2	0.56	2.71	13	1
1:A:1:GLY:O	1:A:2:ASP:C	0.55	2.43	17	1
1:A:2:ASP:O	1:A:6:LYS:CG	0.53	2.56	3	1
1:A:1:GLY:O	1:A:2:ASP:CG	0.53	2.47	4	2
1:A:6:LYS:NZ	1:A:8:TRP:CZ2	0.51	2.70	13	2
1:A:2:ASP:HB2	1:A:6:LYS:CE	0.51	2.35	4	1
1:A:6:LYS:HE2	1:A:8:TRP:CZ2	0.51	2.40	16	2
1:A:6:LYS:HG3	1:A:6:LYS:HD3	0.50	1.26	1	1
1:A:8:TRP:C	1:A:8:TRP:CD1	0.48	2.86	1	1
1:A:8:TRP:CD1	1:A:9:CYS:N	0.48	2.82	10	9
1:A:2:ASP:O	1:A:6:LYS:NZ	0.48	2.44	3	1
1:A:2:ASP:O	1:A:6:LYS:HG2	0.48	2.08	1	2
1:A:6:LYS:HD2	1:A:8:TRP:CZ2	0.47	2.44	3	1
1:A:6:LYS:HG2	1:A:6:LYS:HD2	0.47	1.26	1	1
1:A:2:ASP:CA	1:A:6:LYS:HZ3	0.46	2.22	3	1
1:A:2:ASP:CG	1:A:6:LYS:HE2	0.45	2.31	9	1
1:A:6:LYS:CE	1:A:8:TRP:CZ2	0.45	3.00	11	1
1:A:2:ASP:OD1	1:A:2:ASP:O	0.45	2.35	12	1
1:A:6:LYS:CG	1:A:8:TRP:CZ2	0.45	3.00	16	4
1:A:1:GLY:O	1:A:9:CYS:SG	0.44	2.76	17	1
1:A:7:PRO:HG2	1:A:8:TRP:CE3	0.43	2.49	1	1
1:A:1:GLY:C	1:A:3:CYS:H	0.43	2.15	17	1
1:A:6:LYS:CG	1:A:8:TRP:CE2	0.42	3.01	16	2
1:A:8:TRP:CG	1:A:9:CYS:N	0.42	2.87	10	1
1:A:8:TRP:C	1:A:9:CYS:O	0.41	2.59	10	1
1:A:9:CYS:SG	1:A:10:NH2:N	0.41	2.94	2	2
1:A:5:DTR:O	1:A:6:LYS:HE3	0.41	2.15	15	1
1:A:6:LYS:CD	1:A:8:TRP:CZ2	0.41	3.04	5	1
1:A:2:ASP:HB2	1:A:6:LYS:HE2	0.41	1.93	4	1
1:A:6:LYS:HG3	1:A:8:TRP:CE2	0.40	2.52	16	1
1:A:8:TRP:C	1:A:10:NH2:N	0.40	2.75	1	1
1:A:6:LYS:HG3	1:A:8:TRP:CZ2	0.40	2.52	18	1

## 6.3 Torsion angles [i](#)

### 6.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all NMR entries. The Analysed column shows the number of residues for which the backbone conformation was analysed and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	7/10 (70%)	5±1 (70±13%)	2±1 (23±8%)	1±1 (7±12%)	2	17
All	All	140/200 (70%)	98 (70%)	32 (23%)	10 (7%)	2	17

All 3 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	2	ASP	4
1	A	6	LYS	3
1	A	9	CYS	3

### 6.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all NMR entries. The Analysed column shows the number of residues for which the sidechain conformation was analysed and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	7/7 (100%)	6±1 (83±10%)	1±1 (17±10%)	5	41
All	All	140/140 (100%)	116 (83%)	24 (17%)	5	41

All 4 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	6	LYS	9
1	A	3	CYS	7
1	A	9	CYS	4
1	A	2	ASP	4

### 6.3.3 RNA ⓘ

There are no RNA molecules in this entry.

## 6.4 Non-standard residues in protein, DNA, RNA chains ⓘ

1 non-standard protein/DNA/RNA residue is modelled in this entry.

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length is the number of standard deviations the observed value is removed from the expected value. A bond length with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
1	DTR	A	5	1	14,15,16	1.12±0.34	0±0 (0±1%)

In the following table, the Counts columns list the number of angles for which Mogul statistics could be retrieved, the number of angles that are observed in the model and the number of angles that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond angle is the number of standard deviations the observed value is removed from the expected value. A bond angle with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond angles.

Mol	Type	Chain	Res	Link	Bond angles		
					Counts	RMSZ	#Z>2
1	DTR	A	5	1	15,20,22	1.06±0.04	0±0 (0±0%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	DTR	A	5	1	-	0±0,3,6,8	0±0,2,2,2

All unique bond outliers are listed below.

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	A	5	DTR	O-C	7.61	0.88	1.19	1	1

There are no bond-angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 6.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 6.7 Other polymers [i](#)

There are no such molecules in this entry.

## 6.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	1-A	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	8:TRP	C	9:CYS	N	1.16
1	A	5:DTR	C	6:LYS	N	1.06



## 7 Chemical shift validation

The completeness of assignment taking into account all chemical shift lists is 86% for the well-defined parts and 86% for the entire structure.

### 7.1 Chemical shift list 1

File name: BMRB entry 5608

Chemical shift list name: *assigned\_chem\_shift\_list\_1*

#### 7.1.1 Bookkeeping

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

Total number of shifts	98
Number of shifts mapped to atoms	98
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	1

#### 7.1.2 Chemical shift referencing

No chemical shift referencing corrections were calculated (not enough data).

#### 7.1.3 Completeness of resonance assignments

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 86%, i.e. 79 atoms were assigned a chemical shift out of a possible 92. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	<sup>1</sup> H	<sup>13</sup> C	<sup>15</sup> N
Backbone	26/36 (72%)	13/14 (93%)	8/16 (50%)	5/6 (83%)
Sidechain	42/44 (95%)	28/28 (100%)	14/15 (93%)	0/1 (0%)
Aromatic	11/12 (92%)	6/6 (100%)	5/5 (100%)	0/1 (0%)
Overall	79/92 (86%)	47/48 (98%)	27/36 (75%)	5/8 (62%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 86%, i.e. 79 atoms were assigned a chemical shift out of a possible 92. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	<sup>1</sup> H	<sup>13</sup> C	<sup>15</sup> N
Backbone	26/36 (72%)	13/14 (93%)	8/16 (50%)	5/6 (83%)
Sidechain	42/44 (95%)	28/28 (100%)	14/15 (93%)	0/1 (0%)
Aromatic	11/12 (92%)	6/6 (100%)	5/5 (100%)	0/1 (0%)
Overall	79/92 (86%)	47/48 (98%)	27/36 (75%)	5/8 (62%)

#### 7.1.4 Statistically unusual chemical shifts [i](#)

The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

Mol	Chain	Res	Type	Atom	Shift, ppm	Expected range, ppm	Z-score
1	A	6	LYS	HB2	0.13	3.03 – 0.53	-6.6

#### 7.1.5 Random Coil Index (RCI) plots [i](#)

The image below reports *random coil index* values for the protein chains in the structure. The height of each bar gives a probability of a given residue to be disordered, as predicted from the available chemical shifts and the amino acid sequence. A value above 0.2 is an indication of significant predicted disorder. The colour of the bar shows whether the residue is in the well-defined core (black) or in the ill-defined residue ranges (cyan), as described in section 2 on ensemble composition.

Random coil index (RCI) for chain A:

